

THAT WHICH IS CLAIMED IS:

1. A system for making wallboard or backerboard sheets comprising:

a mixer for mixing materials for making aerated concrete;

5 at least one face layer supply;

a former downstream from said mixer for forming core material having opposing first and second major surfaces and comprising aerated concrete, and for securing at least one face layer from said at least one
10 face layer supply onto at least one of the first and second major surfaces of the core material; and

a cutter downstream from said former for cutting the core material and at least one face layer secured thereto into a plurality of wallboard or
15 backerboard sheets.

2. A system according to Claim 1 wherein said former comprises an autoclave for curing the core material prior to securing the at least one face layer thereto.

3. A system according to Claim 1 wherein said former comprising an autoclave for curing the core material after securing the at least one face layer thereto.

4. A system according to Claim 1 wherein said former comprises:

a mold downstream from said mixer for receiving the materials for making aerated concrete
5 therein and allowing the materials to rise and stiffen into a body;

an autoclave downstream from said mold for curing the body; and

10 a divider downstream from said autoclave for dividing the cured body into a plurality of cured sheets to serve as the core material.

5 5. A system according to Claim 4 wherein said former further comprises a conveyor and a sheet handler cooperating therewith for joining a plurality of the cured sheets together in end-to-end relation while advancing the cured sheets along a path of travel.

6. A system according to Claim 5 wherein said former secures the at least one face layer while the cured sheets are advanced along the path of travel. ✓

7. A system according to Claim 1 said former comprises:

5 a mold downstream from said mixer for receiving the materials for making aerated concrete therein and allowing the materials to rise and stiffen into a body;

a divider downstream from said mold for dividing the body into a plurality of uncured sheets; and

10 an autoclave downstream from said divider for curing the uncured sheets to serve as the core material.

8. A system according to Claim 7 wherein said former further comprises a conveyor and a sheet handler cooperating therewith for joining a plurality of the cured sheets together in end-to-end relation

- 5 while advancing the cured sheets along a path of travel.

9. A system according to Claim 8 wherein said former secures the at least one face layer while the cured sheets are advanced along the path of travel.

10. A system according to Claim 1 said former comprises:

- a mold downstream from said mixer for receiving the materials for making aerated concrete
5 therein and allowing the materials to rise and stiffen into a body;

- a divider downstream from said mold for dividing the body into a plurality of uncured sheets to serve as the core material to which the at least one
10 face layer is secured; and

an autoclave downstream from said cutter for curing the uncured sheets.

11. A system according to Claim 1 wherein said former comprises:

- a dispenser and a conveyor cooperating therewith for dispensing the materials for making
5 aerated concrete adjacent at least one face layer as the at least one face layer is advanced along a path of travel; and

an autoclave downstream from said cutter for curing the materials for making aerated concrete.

12. A system according to Claim 1 wherein said former secures first and second face layers on respective first and second major surfaces of the core material.

13. A system according to Claim 1 wherein said at least one face layer supply comprises at least one paper face layer supply.

14. A system according to Claim 1 wherein said at least one face layer supply comprises at least one moisture-resistant face layer supply.

15. A system according to Claim 1 wherein said former comprises a bevel shaper for forming the first major surface of the core material to have beveled portions adjacent respective opposing
5 longitudinal side edges.

16. A system according to Claim 1 wherein said former further comprises an edge wrapper for securing the at least one face layer to extend around the opposing longitudinal side edges.

17. A system according to Claim 1 further comprising a reinforcing fiber supply cooperating with said mixer for adding reinforcing fibers to the materials for making aerated concrete.

18. A system for making wallboard or backerboard sheets comprising:

a mixer for mixing materials for making aerated concrete;

5 at least one face layer supply;

a former downstream from said mixer for forming core material having opposing first and second major surfaces and comprising aerated concrete, and for securing at least one face layer from said at least one
10 face layer supply onto at least one of the first and

second major surfaces of the core material, said former comprising

- 15 a mold downstream from said mixer for receiving the materials for making aerated concrete therein and allowing the materials to rise and stiffen into a body;
- an autoclave downstream from said mold for curing the body, and
- 20 a divider downstream from said autoclave for dividing the cured body into a plurality of cured sheets to serve as the core material; and
- 25 a cutter downstream from said former for cutting the core material and at least one face layer secured thereto into a plurality of wallboard or backerboard sheets.

19. A system according to Claim 18 wherein said former further comprises a conveyor and a sheet handler cooperating therewith for joining a plurality of the cured sheets together in end-to-end relation

5 while advancing the cured sheets along a path of travel.

20. A system according to Claim 19 wherein said former secures the at least one face layer while the cured sheets are advanced along the path of travel.

21. A system according to Claim 20 wherein said former secures first and second face layers on respective first and second major surfaces of the core material.

22. A system according to Claim 19 wherein said at least one face layer supply comprises at least one paper face layer supply.

23. A system according to Claim 19 wherein said at least one face layer supply comprises at least one moisture-resistant face layer supply.

24. A system according to Claim 19 wherein said former comprises a bevel shaper for forming the first major surface of the core material to have beveled portions adjacent respective opposing
5 longitudinal side edges.

25. A system according to Claim 19 wherein said former further comprises an edge wrapper for securing the at least one face layer to extend around the opposing longitudinal side edges.

26. A system according to Claim 19 further comprising a reinforcing fiber supply cooperating with said mixer for adding reinforcing fibers to the materials for making aerated concrete.

27. A system for making wallboard or backerboard sheets comprising:

a mixer for mixing materials for making aerated concrete;

5 at least one face layer supply;

a former downstream from said mixer for forming core material having opposing first and second major surfaces and comprising aerated concrete, and for securing at least one face layer from said at least one
10 face layer supply onto at least one of the first and

second major surfaces of the core material, said former comprising

- 15 a mold downstream from said mixer for receiving the materials for making aerated concrete therein and allowing the materials to rise and stiffen into a body, and
- 20 a divider downstream from said mold for dividing the body into a plurality of uncured sheets to serve as the core material to which the at least one face layer is secured, and
- 25 an autoclave downstream from said divider for curing the uncured sheets; and a cutter between said divider and said autoclave for cutting the core material and at least one face layer secured thereto into a plurality of wallboard or backerboard sheets.

28. A system according to Claim 27 wherein said former secures first and second face layers on respective first and second major surfaces of the core material.

29. A system according to Claim 27 wherein said at least one face layer supply comprises at least one paper face layer supply.

30. A system according to Claim 27 wherein said at least one face layer supply comprises at least one moisture-resistant face layer supply.

31. A system according to Claim 27 wherein said former comprises a bevel shaper for forming the first major surface of the core material to have beveled portions adjacent respective opposing
5 longitudinal side edges.

32. A system according to Claim 27 wherein said former further comprises an edge wrapper for securing the at least one face layer to extend around the opposing longitudinal side edges.

33. A system according to Claim 27 further comprising a reinforcing fiber supply cooperating with said mixer for adding reinforcing fibers to the materials for making aerated concrete.

34. A system for making wallboard or backerboard sheets comprising:

a mixer for mixing materials for making aerated concrete;

5 at least one face layer supply;

a former downstream from said mixer for forming core material having opposing first and second major surfaces and comprising aerated concrete, and for securing at least one face layer from said at least one
10 face layer supply onto at least one of the first and second major surfaces of the core material, said former comprising

a dispenser and a conveyor cooperating therewith for dispensing the materials for
15 making aerated concrete adjacent at least one face layer as the at least one face layer is advanced along a path of travel, and

an autoclave downstream from said dispenser for curing the materials for making
20 aerated concrete; and

a cutter between said dispenser and said autoclave for cutting the core material and at least one face layer secured thereto into a plurality of wallboard or backerboard sheets.

35. A system according to Claim 34 wherein said former secures first and second face layers on respective first and second major surfaces of the core material.

36. A system according to Claim 34 wherein said at least one face layer supply comprises at least one paper face layer supply.

37. A system according to Claim 34 wherein said at least one face layer supply comprises at least one moisture-resistant face layer supply.

38. A system according to Claim 34 wherein said former comprises a bevel shaper for forming the first major surface of the core material to have beveled portions adjacent respective opposing
5 longitudinal side edges.

39. A system according to Claim 34 wherein said former further comprises an edge wrapper for securing the at least one face layer to extend around the opposing longitudinal side edges.

40. A system according to Claim 34 further comprising a reinforcing fiber supply cooperating with said mixer for adding reinforcing fibers to the materials for making aerated concrete.